

Total Maximum Daily Load (TMDL) Implementation



Oyster & Mosquito Creeks
Kilmarnock, Virginia

VA Dept. of Conservation and Recreation
January 8th, 2009

The TMDL Process: 3 Steps

- 1) TMDL study
- 2) TMDL implementation plan
(clean-up plan)
- 3) Implement plan

DCR-DSWC Regional Office Boundaries

- DCR-DSWC Regional Office Sites

--- Jurisdiction Boundary

— DCR-DSWC Regional Office Boundary

Potomac Watershed Office
98 Alexandria Pike, Suite 33
Warrenton, VA 20186
Ph: 540/347-6420 Fax: 540/347-6423

Shenandoah Watershed Office
44 Sangers Lane, Suite 102
Staunton, VA 24401
Ph: 540/332-9991 Fax: 540/332-8956

James Watershed Office
101 North 14th Street, 11th Floor
Richmond, VA 23219
Ph: 804/225-4468 Fax: 804/371-0771

York & Rappahannock Watersheds Office
772 Richmond Beach Road/P. O. Box 1425
Tappahannock, VA 22560
Ph: 804/443-6752 Fax: 804/443-4534

New River Watershed Office
148 Broad Street/P. O. Box 1506
Dublin, VA 24084
Ph: 540/643-2590 Fax: 540/643-2597

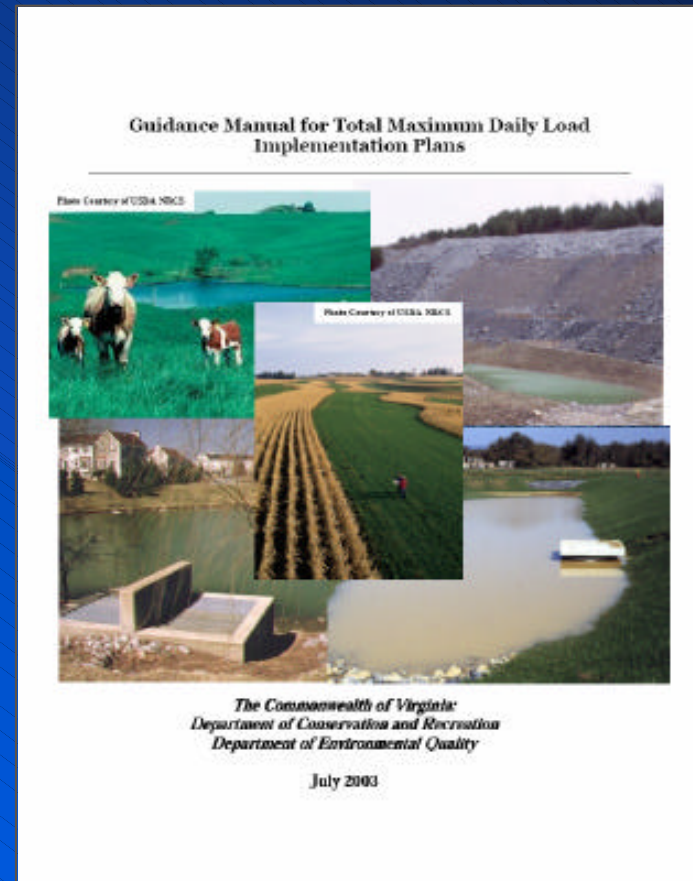
Upper Tennessee & Big Sandy Watersheds Office
252 W. Main Street, Suite 3
Abingdon, VA 24210
Ph: 276/676-5529 Fax: 276/676-5527

Roanoke River Watershed Office
11632 Highway 15 South
Clarksville, VA 23927
Ph: 434/374-3648 Fax: 434/374-3656

Albemarle, Chowan & Coastal Watersheds Office
1548-A Holland Road
Suffolk, VA 23434
Ph: 757/925-2468 Fax: 757/925-2388

Why Implementation Plans?

- Implementation Plan development is required by state legislation
- Supported by federal, state and local organizations
- Procedures outlined in DCR & DEQ Implementation Plan Guidance Document



Implementation Plan Development

- Implementation Plan is done **locally**
- Stakeholders have the opportunity to participate in the plan development
 - Public meetings
 - Working groups
 - Steering committee



Integration with other Watershed Plans

- Need to account for and **acknowledge** other planning activities within the watershed
- Coordinate with other water quality plans:
 - Watershed plans/roundtables
 - Local Comprehensive Plans
 - Water Supply Plans
 - Green Infrastructure Planning



What goes into an implementation plan?

- Existing plans or improvement projects
- Actions to improve water quality
- Project timeline
 - Implementation goals
 - Implementation milestones
- Roles and responsibilities
- Funding sources

Best Management Practices to Address Bacteria

Agricultural

- Riparian buffers
- Exclusion of livestock from streams
- Rotational grazing
- Waste storage facilities



Photo: Jeff Vanuga, NRCS (2002)

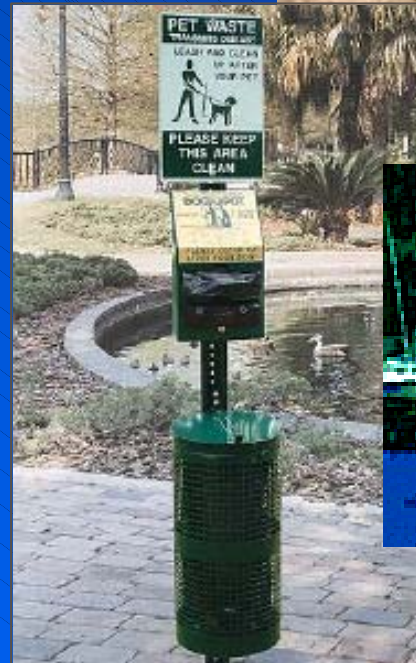
Riparian buffer adjacent to pasture

Best Management Practices to Address Bacteria

Residential/Urban

- Septic tank pumpout
- Septic system repair/replacement
- Alternative on-site septic systems
- Removal of straight pipes and gray water discharges
- Pet waste programs
- No-discharge zones (boats)

Photo: Julie Jenkins, Shenandoah Valley SWCD



Potential Funding Sources

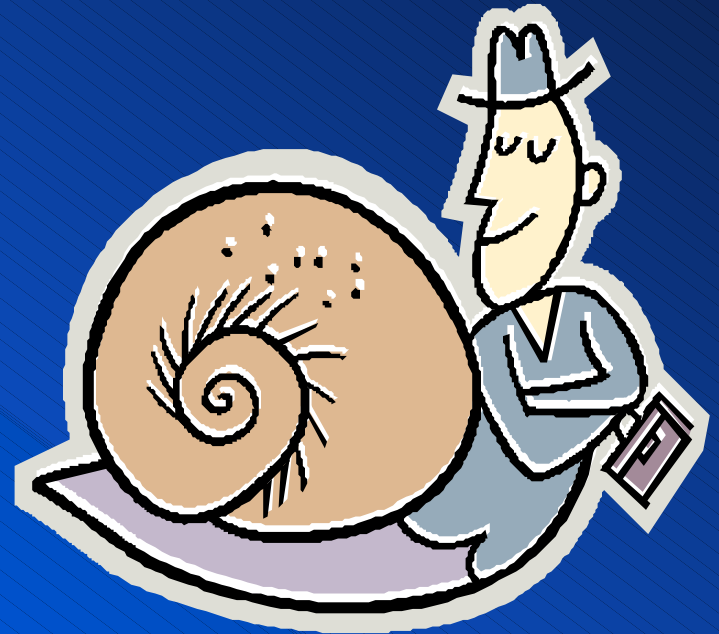
Potential funding sources for best management practices identified in Implementation Plans:

- USDA Programs - CREP/EQIP
- Water Quality Improvement Fund
- State Revolving Loan Funds
- State Cost-Share Program
- State Tax Credits
- National Fish & Wildlife Foundation



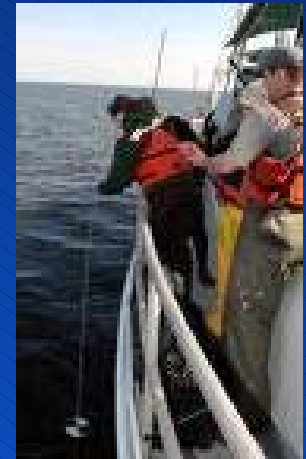
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What can you do in the meantime?

- Show interest to agencies (comments to both DCR/DEQ)
- Continue BMP implementation
- Initiate outreach activities
- Continue stream monitoring
- Form watershed steering committee
- Identify funding opportunities and partnerships



The \$ Challenge

- The 2006-2008 General Assembly appropriated funds to be targeted to TMDL impaired stream segments, but can only use funds for Agricultural BMP implementation, not implementation plan development
- We need a dedicated source of state funds for implementation planning

Currently, DCR has completed 19 IP's, including 47 impaired stream segments

Roanoke (4)

Shenandoah (4)

James (3)

New (3)

Tennessee – Big Sandy (2)

Potomac (1)

Rappahannock (1)

Chesapeake Bay Coastal (1)

5 under development now: Bluestone River, Mossy Creek and tribs, Upper Hazel River, Cub, Turnip and Buffalo Creeks, Ash Camp and Twittys Creeks, and Pigg River and Smith Creek

DEQ has prepared ~14

DCR and DEQ have done 2 together

One last point to remember

TMDL's and IP's are a mechanism for restoring water quality and are an opportunity for diverse groups of people to come together to improve watershed health



Contact Information



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